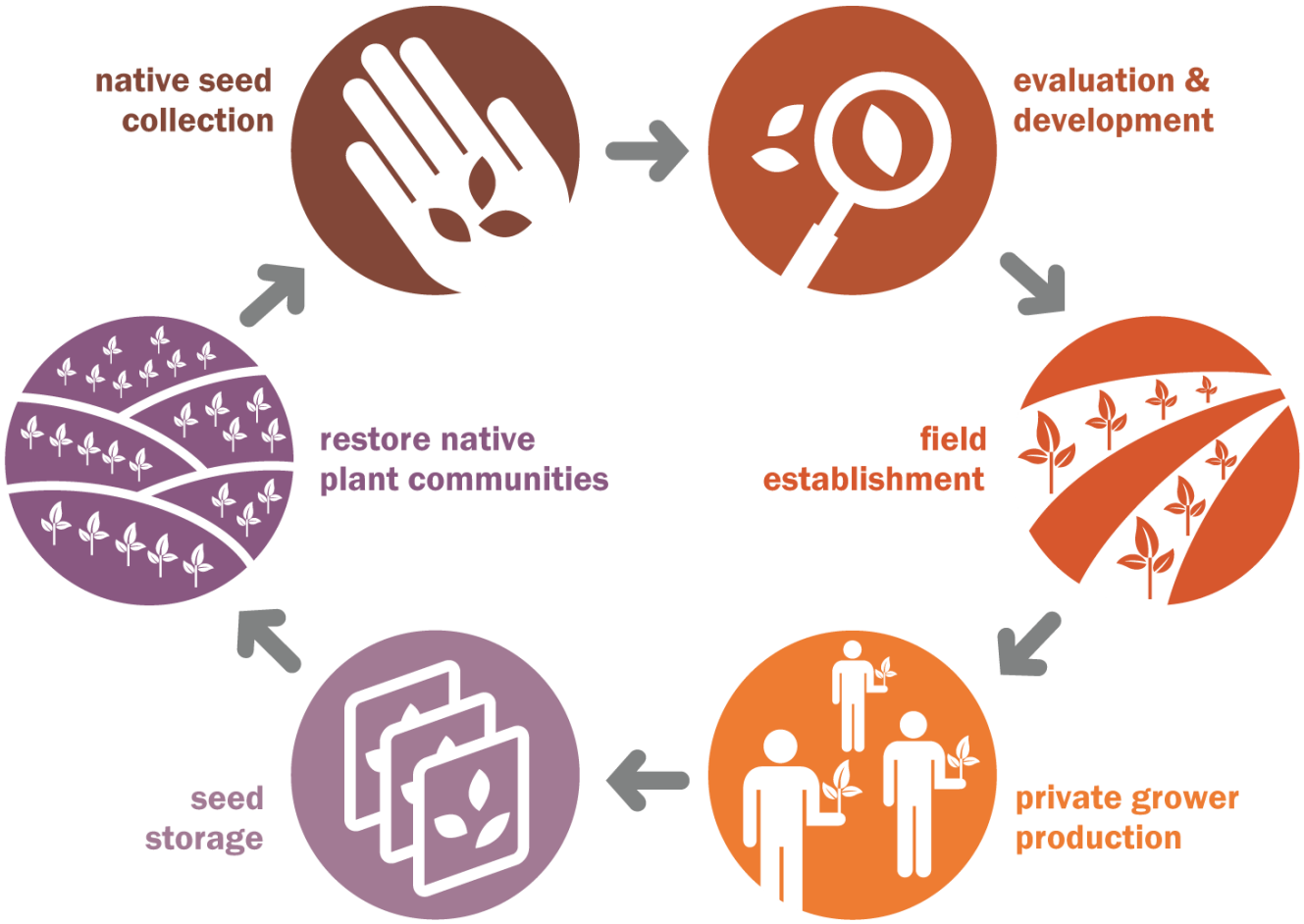
Native Plant Materials Development Process



Congress directed the Bureau of Land Management to develop a long-term program for native plant materials. Under the national leadership of the BLM Plant Conservation & Restoration Program, the interagency Native Plant Materials Development Program has been working since 2001 to develop high quality seeds and seedlings of America's native plant species for restoration, rehabilitation, and reclamation. Ecoregional programs have been established in the Colorado Plateau, Great Basin, Mojave Desert, and Pacific Northwest to prioritize, research, and guide the development of restoration seed needed within each ecoregion. In 2015, 12 Federal agencies signed on to the National Seed Strategy, which outlines specific goals and objectives to build capacity at each step of the native plant materials development process.

There are many steps involved in the process of developing a reliable, stable crop from wild collected species. Native plant materials, like agronomic crops, take an average of 10-20 years to develop as consistent, reliable commercially available species. Starting with native seed collection, the time and length of each step in the development process varies for each grass, forb and shrub. The goal of the program is to facilitate this process and to increase capacity within the Federal agencies and the private sector for ecologically appropriate native seed.

Graphic adapted from the National Fish, Wildlife and Plants Climate Adaptation Strategy.

Step by Step: Developing High Quality Native Seed for Restoration

The Bureau of Land Management's Plant Conservation & Restoration Program works with a variety of partners, including Federal, local government, non-profit, and private, to accomplish the science based steps of the development process.

Step 1: Native Seed Collection
Wildland native seed collections are the foundation for native plant materials development. Native seed collections made by Seeds of Success capture the genetic diversity within the species. A portion of each collection goes into long-term conservation storage. The remainder is available for research and restoration.

Step 2: Evaluation and Development
Surprisingly little is known about most native plant species. Research is critical to providing basic information on species biology, including germination requirements, pollinators, seed production technology, and seed transfer zones to determine where to use the seed.

Step 3: Field Establishment
This is the initial step in developing a crop of ecoregionally adapted seed from wild-collected seed. Producing stock seed for growers requires increasing the amount of seed under stringent agricultural and environmental conditions to ensure production of high quality, genetically diverse seed.

Step 4: Seed Production
Native seed stock is given to growers for large-scale seed production. The seed is available commercially to both the public and private sectors for repairing damaged ecosystems, such as post fire rehabilitation, reclamation after energy development, or restoration of fish, wildlife and plant habitats.

Step 5: Seed Storage
Seed is a valuable resource which requires specialized conditions and facilities to maintain its viability. Adequate storage capacity is necessary for Federal agencies to provide genetically appropriate materials – seeds or transplants – for wildlife habitat restoration following intense wildfire seasons or to conduct proactive restoration.

Step 6: Restore Native Plant Communities
The ultimate goal of the Native Plant Materials Development Program is to restore native plant communities that provide ecosystem services and wildlife habitat. Restoration results benefit from incorporating genetic considerations, including using the research to choose the best seed source and seed mix to maximize plant establishment and sustainability in a changing climate.

For more information:
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